

935.1PC.TXT

## SEQUENCE LISTING

&lt;110&gt; Novartis AG, The Scripps Research Institute

<120> METHODS AND COMPOSITIONS ASSOCIATED WITH  
NOCICEPTIVE PAIN

&lt;130&gt; 4-32851A/SCR

&lt;150&gt; US 06/434,540

&lt;151&gt; 2002-12-18

&lt;160&gt; 13

&lt;170&gt; FastSEQ for Windows Version 4.0.

&lt;210&gt; 1

&lt;211&gt; 320

&lt;212&gt; PRT

&lt;213&gt; Mus Musculus

&lt;400&gt; 1

Leu Asn Val Met Val Gln His Asn Arg Ile Glu Leu Leu Asn His Pro  
 1 5 10 15  
 Val Cys Arg Glu Tyr Leu Leu Met Lys Trp Cys Ala Tyr Gly Phe Arg  
 20 25 30  
 Ala His Met Met Asn Leu Gly Ser Tyr Cys Leu Gly Leu Ile Pro Met  
 35 40 45  
 Thr Leu Leu Val Val Lys Ile Gln Pro Gly Met Ala Phe Asn Ser Thr  
 50 55 60  
 Gly Ile Ile Asn Gly Thr Ser Ser Thr His Glu Glu Arg Ile Asp Thr  
 65 70 75 80  
 Leu Asn Ser Phe Pro Ile Lys Ile Cys Met Ile Leu Val Phe Leu Ser  
 85 90 95  
 Ser Ile Phe Gly Tyr Cys Lys Glu Val Ile Gln Ile Phe Gln Gln Lys  
 100 105 110  
 Arg Asn Tyr Phe Leu Asp Tyr Asn Asn Ala Leu Glu Trp Val Ile Tyr  
 115 120 125  
 Thr Thr Ser Ile Ile Phe Val Leu Pro Leu Phe Leu Asn Ile Pro Ala  
 130 135 140  
 Tyr Met Gln Trp Gln Cys Gly Ala Ile Ala Ile Phe Phe Tyr Trp Met  
 145 150 155 160  
 Asn Phe Leu Leu Tyr Leu Gln Arg Phe Glu Asn Cys Gly Ile Phe Ile  
 165 170 175  
 Val Met Leu Glu Val Ile Phe Lys Thr Leu Leu Arg Ser Thr Gly Val  
 180 185 190  
 Phe Ile Phe Leu Leu Ala Phe Gly Leu Ser Phe Tyr Val Leu Leu  
 195 200 205  
 Asn Phe Gln Asp Ala Phe Ser Thr Pro Leu Leu Ser Leu Ile Gln Thr  
 210 215 220  
 Phe Ser Met Met Leu Gly Asp Ile Asn Tyr Arg Asp Ala Phe Leu Glu  
 225 230 235 240  
 Pro Leu Phe Arg Asn Glu Leu Ala Tyr Pro Val Leu Thr Phe Gly Gln  
 245 250 255  
 Leu Ile Ala Phe Thr Met Phe Val Pro Ile Val Leu Met Asn Leu Leu  
 260 265 270  
 Ile Gly Leu Ala Val Gly Asp Ile Ala Glu Val Gln Lys His Ala Ser  
 275 280 285  
 Leu Lys Arg Ile Ala Met Gln Val Glu Leu His Thr Asn Leu Glu Lys  
 290 295 300  
 Lys Leu Pro Leu Trp Tyr Leu Arg Lys Val Asp Gln Arg Ser Thr Ile  
 305 310 315 320

&lt;210&gt; 2

&lt;211&gt; 319

&lt;212&gt; PRT

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<213> Homo sapiens

<400> 2  
 Leu Ash Ala Met Val Gln Asn Asn Arg Ile Glu Leu Leu Asn His Pro  
 1 5 10 15  
 val Cys Lys Glu Tyr Leu Leu Met Lys Trp Leu Ala Tyr Gly Phe Arg  
 20 25 30  
 Ala His Met Met Asn Leu Gly Ser Tyr Cys Leu Gly Leu Ile Pro Met  
 35 40 45  
 Thr Ile Leu Val Val Asn Ile Lys Pro Gly Met Ala Phe Asn Ser Thr  
 50 55 60  
 Gly Ile Ile Asn Glu Thr Ser Asp His Ser Glu Ile Leu Asp Thr Thr  
 65 70 75 80  
 Asn Ser Tyr Leu Ile Lys Thr Cys Met Ile Leu Val Phe Leu Ser Ser  
 85 90 95  
 Ile Phe Gly Tyr Cys Lys Glu Ala Gly Gln Ile Phe Gln Gln Lys Arg  
 100 105 110  
 Asn Tyr Phe Met Asp Ile Ser Asn Val Leu Glu Trp Ile Ile Tyr Thr  
 115 120 125  
 Thr Gly Ile Ile Phe Val Leu Pro Leu Phe Val Glu Ile Pro Ala His  
 130 135 140  
 Leu Gln Trp Gln Cys Gly Ala Ile Ala Val Tyr Phe Tyr Trp Met Asn  
 145 150 155 160  
 Phe Leu Leu Tyr Leu Gln Arg Phe Glu Asn Cys Gly Ile Phe Ile Val  
 165 170 175  
 Met Leu Glu Val Ile Leu Lys Thr Leu Leu Arg Ser Thr Val Val Phe  
 180 185 190  
 Ile Phe Leu Leu Ala Phe Gly Leu Ser Phe Tyr Ile Leu Leu Asn  
 195 200 205  
 Leu Gln Asp Pro Phe Ser Ser Pro Leu Leu Ser Ile Ile Gln Thr Phe  
 210 215 220  
 Ser Met Met Leu Gly Asp Ile Asn Tyr Arg Glu Ser Phe Leu Glu Pro  
 225 230 235 240  
 Tyr Leu Arg Asn Glu Leu Ala His Pro Val Leu Ser Phe Ala Gln Leu  
 245 250 255  
 Val Ser Phe Thr Ile Phe Val Pro Ile Val Leu Met Asn Leu Leu Ile  
 260 265 270  
 Gly Leu Ala Val Gly Asp Ile Ala Glu Val Gln Lys His Ala Ser Leu  
 275 280 285  
 Lys Arg Ile Ala Met Gln Val Glu Leu His Thr Ser Leu Glu Lys Lys  
 290 295 300  
 Leu Pro Leu Trp Phe Leu Arg Lys Val Asp Gln Lys Ser Thr Ile  
 305 310 315

<210> 3

<211> 352

<212> PRT

<213> *Drosophila melanogaster*

<400> 3  
 Leu Asn Thr Met Val Thr His Gly Arg Val Glu Leu Leu Ala His Pro  
 1 5 10 15  
 Leu Ser Gln Lys Tyr Leu Gln Met Lys Trp Asn Ser Tyr Gly Lys Tyr  
 20 25 30  
 Phe His Leu Ala Asn Leu Leu Ile Tyr Ser Ile Phe Leu Val Phe Val  
 35 40 45  
 Thr Ile Tyr Ser Ser Leu Met Met Asn Asn Ile Glu Leu Lys Ala Gly  
 50 55 60  
 Asp Asn Lys Thr Met Ser Gln Tyr Cys Asn Met Gly Trp Glu Gln Leu  
 65 70 75 80  
 Thr Met Asn Leu Ser Gln Asn Pro Ser Val Ala Ser Gln Ile Arg Leu  
 85 90 95  
 Asp Ser Cys Glu Glu Arg Ile Asn Arg Thr Thr Ala Ile Leu Phe Cys  
 100 105 110  
 Ala Val Val Ile Val Val Tyr Ile Leu Leu Asn Ser Met Arg Glu Leu  
 115 120 125  
 Ile Gln Ile Tyr Gln Gln Lys Leu His Tyr Ile Leu Glu Thr Val Asn

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<210> 4  
<211> 368  
<212> PRT  
<213> *Drosophila melanogaster*

<400> 4  
 Leu Asp Val Leu Ile Glu Asn Glu Gln Lys Glu Val Ile Ala His Thr  
 1 5 10 15  
 Val Val Gln Arg Tyr Leu Gln Glu Leu Trp His Gly Ser Leu Thr Trp  
 20 25 30  
 Ala Ser Trp Lys Ile Leu Leu Leu Leu Val Ala Phe Ile Val Cys Pro  
 35 40 45  
 Pro Val Trp Ile Gly Phe Thr Phe Pro Met Gly His Lys Phe Asn Lys  
 50 55 60  
 Val Pro Ile Ile Lys Phe Met Ser Tyr Leu Thr Ser His Ile Tyr Leu  
 65 70 75 80  
 Met Ile His Leu Ser Ile Val Gly Ile Thr Pro Ile Tyr Pro Val Leu  
 85 90 95  
 Arg Leu Ser Leu Val Pro Tyr Trp Tyr Glu Val Gly Leu Leu Ile Trp  
 100 105 110  
 Leu Ser Gly Leu Leu Leu Phe Glu Leu Thr Asn Pro Ser Asp Lys Ser  
 115 120 125  
 Gly Leu Gly Ser Ile Lys Val Leu Val Leu Leu Leu Gly Met Ala Gly  
 130 135 140  
 Val Gly Val His Val Ser Ala Phe Leu Phe Val Ser Lys Glu Tyr Trp  
 145 150 155 160  
 Pro Thr Leu Val Tyr Cys Arg Asn Gln Cys Phe Ala Leu Ala Phe Leu  
 165 170 175  
 Leu Ala Cys Val Gin Ile Leu Asp Phe Leu Ser Phe His His Leu Phe  
 180 185 190  
 Gly Pro Trp Ala Ile Ile Ile Gly Asp Leu Leu Lys Asp Leu Ala Arg  
 195 200 205  
 Phe Leu Ala Val Leu Ala Ile Phe Val Phe Gly Phe Ser Met His Ile  
 210 215 220  
 Val Ala Leu Asn Gln Ser Phe Ala Asn Phe Ser Pro Glu Asp Leu Arg  
 225 230 235 240  
 Ser Phe Glu Lys Lys Asn Arg Asn Arg Gly Tyr Phe Ser Asp Val Arg  
 245 250 255  
 Met His Pro Ile Asn Ser Phe Glu Leu Leu Phe Phe Ala Val Phe Gly

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Gln	Thr	Thr	Thr	Glu	Gln	Thr	Gln	Val	Asp	Lys	Ile	Lys	Ash	Val	Ala
260	265	270													
275	280	285													
Thr	Pro	Thr	Gln	Pro	Tyr	Trp	Val	Glu	Tyr	Leu	Phe	Lys	Ile	Val	Phe
290	295	300													
Gly	Ile	Tyr	Met	Leu	Val	Ser	Val	Val	Val	Leu	Ile	Asn	Leu	Leu	Ile
305	310	315	320												
Ala	Met	Met	Ser	Asp	Thr	Tyr	Gln	Arg	Ile	Gln	Val	Val	Leu	Leu	Asn
325	330	335													
Ala	Leu	Leu	Ser	Asn	Ser	Thr	Leu	Phe	Ile	Asn	Ser	Tyr	Phe	Asn	His
340	345	350													
Lys	Tyr	Ile	Asn	Phe	Ile	Leu	His	Cys	Val	Leu	Ile	Ile	Leu	Tyr	Phe
355	360	365													

&lt;210&gt; 5

&lt;211&gt; 365

&lt;212&gt; PRT

&lt;213&gt; Caenorhabditis elegans

<400> 5

Leu	Asp	Val	Leu	Ile	Glu	Asn	Glu	Gln	Lys	Glu	Val	Val	Ser	Tyr	Ala
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Ser	Val	Gln	Arg	Tyr	Leu	Thr	Glu	Val	Trp	Thr	Ala	Arg	Val	Asp	Trp
20	25	30													
Ser	Phe	Gly	Lys	Phe	Val	Ala	Phe	Ser	Leu	Phe	Val	Leu	Ile	Cys	Pro
35	40	45													
Pro	Ala	Trp	Phe	Tyr	Phe	Ser	Leu	Pro	Leu	Asp	Ser	Arg	Ile	Gly	Arg
50	55	60													
Ala	Pro	Ile	Ile	Lys	Phe	Val	Cys	His	Ile	Val	Ser	His	Val	Tyr	Phe
65	70	75	80												
Thr	Ile	Leu	Leu	Thr	Ile	Val	Val	Leu	Asn	Ile	Thr	His	Lys	Met	Tyr
85	90	95													
Glu	Val	Thr	Ser	Val	Val	Pro	Asn	Pro	Val	Glu	Trp	Leu	Leu	Leu	Leu
100	105	110													
Trp	Leu	Ser	Gly	Asn	Leu	Val	Ser	Glu	Leu	Ser	Thr	Val	Gly	Gly	Gly
115	120	125													
Ser	Gly	Leu	Gly	Ile	Val	Lys	Val	Leu	Ile	Leu	Val	Leu	Ser	Ala	Met
130	135	140													
Ala	Ile	Ala	Val	His	Val	Leu	Ala	Phe	Leu	Leu	Pro	Ala	Val	Phe	Leu
145	150	155	160												
Thr	His	Leu	Asp	Asn	Asp	Glu	Lys	Leu	His	Phe	Ala	Arg	Thr	Met	Leu
165	170	175													
Tyr	Leu	Lys	Asn	Gln	Leu	Phe	Ala	Phe	Ala	Leu	Leu	Phe	Ala	Phe	Val
180	185	190													
Glu	Tyr	Leu	Asp	Phe	Leu	Thr	Val	His	His	Leu	Phe	Gly	Pro	Trp	Ala
195	200	205													
Ile	Ile	Ile	Arg	Asp	Leu	Met	Tyr	Asp	Leu	Ala	Arg	Phe	Leu	Val	Ile
210	215	220													
Leu	Met	Leu	Phe	Val	Ala	Gly	Phe	Thr	Leu	His	Val	Thr	Ser	Ile	Phe
225	230	235	240												
Gln	Pro	Ala	Tyr	Gln	Pro	Val	Asp	Glu	Asp	Ser	Ala	Glu	Leu	Met	Arg
245	250	255													
Leu	Ala	Ser	Pro	Ser	Gln	Thr	Leu	Glu	Met	Leu	Phe	Phe	Ser	Leu	Phe
260	265	270													
Gly	Leu	Val	Glu	Pro	Asp	Ser	Met	Pro	Pro	Leu	His	Leu	Val	Pro	Asp
275	280	285													
Phe	Ala	Lys	Ile	Ile	Leu	Lys	Leu	Leu	Phe	Gly	Ile	Tyr	Met	Met	Val
290	295	300													
Thr	Leu	Ile	Val	Leu	Ile	Asn	Leu	Leu	Ile	Ala	Met	Met	Ser	Asp	Thr
305	310	315	320												
Tyr	Gln	Arg	Ile	Gln	Ala	Gln	Ser	Asp	Lys	Glu	Trp	Lys	Phe	Gly	Arg
325	330	335													
Ala	Ile	Leu	Ile	Arg	Gln	Met	Asn	Lys	Lys	Ser	Ala	Thr	Pro	Ser	Pro
340	345	350													
Ile	Asn	Met	Leu	Thr	Lys	Leu	Ile	Ile	Val	Leu	Arg	Val			
355	360	365													

<210> 6  
<211> 331  
<212> PRT  
<213> *Caenorhabditis elegans*

<400> 6  
Leu Lys Leu Met Ala Asp Ala Glu Lys Leu His Leu Leu Asn His Pro  
1 5 10 15  
Leu Ser Lys Ala Leu Leu Lys Tyr Lys Trp Asn Arg Leu Gly Arg Pro  
20 25 30  
Met Tyr Tyr Phe Ala Leu Phe Met Tyr Leu Val Phe Ile Val Ser Leu  
35 40 45  
Thr Gln Tyr Val Arg His Thr Lys Ala Pro Tyr Asn Val Trp Asn Glu  
50 55 60  
Glu Ser Tyr Tyr Asp Ser Glu Tyr Phe Asp Glu Asn Glu Thr Cys Pro  
65 70 75 80  
Gln Ile Asn Thr Thr Lys Pro Asp Val Val Trp Lys Ile Ile Ile Gln  
85 90 95  
Thr Leu Ala Val Cys Gln Ile Leu Val Glu Cys Phe Gln Leu Phe Gln  
100 105 110  
Arg Lys Phe Ala Tyr Leu Val Asn Trp Glu Asn Trp Ile Asp Cys Phe  
115 120 125  
Ile Tyr Ser Thr Ala Leu Ile Thr Val Tyr Asp Phe Ser Glu Cys Ser  
130 135 140  
Ala Thr Ser Gly Val Arg Gln Asn Trp Gln Trp Ile Leu Ala Ala Leu  
145 150 155 160  
Cys Ile Phe Phe Gly Trp Ile Asn Leu Leu Phe Met Ile Arg Lys Met  
165 170 175  
Pro Arg Phe Gly Ile Phe Val Val Met Phe Val Asp Ile Val Lys Thr  
180 185 190  
Phe Phe Arg Phe Phe Pro Val Phe Val Leu Phe Ile Ile Ala Phe Ser  
195 200 205  
Ser Ser Phe Tyr Val Ile Leu Gln Asn Arg Pro Glu Phe Ser Thr Ile  
210 215 220  
Phe Met Ser Pro Leu Lys Thr Thr Val Met Met Ile Gly Glu Phe Glu  
225 230 235 240  
Phe Thr Gly Ile Phe His Gly Asp Glu Thr Thr His Ala Glu Lys Met  
245 250 255  
Phe Gly Pro Ala His Thr Ala Val Ala Cys Ala Leu Phe Phe Phe  
260 265 270  
Cys Ile Ile Met Thr Ile Leu Leu Met Asn Leu Leu Val Gly Leu Ala  
275 280 285  
Val Asp Asp Ile Lys Gly Val Gln Glu Lys Ala Glu Leu Lys Arg Leu  
290 295 300  
Ala Met Gln Val Asp Leu Val Leu Gln Ile Glu Ala Ser Leu His Phe  
305 310 315 320  
Phe Ile Gln Arg Thr Lys Lys Tyr Ala Thr Cys  
325 330

<210> 7  
<211> 333  
<212> PRT  
<213> *Drosophila melanogaster*

<400> 7  
Leu Asn Thr Phe Val Asp Glu Gly Gln Lys Glu Ile Leu Glu His Pro  
1 5 10 15  
Leu Cys Ser Ser Phe Leu Tyr Ile Lys Trp Gly Lys Ile Arg Lys Tyr  
20 25 30  
Tyr Ile Gly Arg Leu Ile Phe Cys Phe Ser Phe Val Leu Phe Leu Thr  
35 40 45  
Leu Tyr Val Leu Thr Ala Leu Ala His Asn Cys Tyr Asn Gly Ser Lys  
50 55 60  
Asn Asp Asn Thr Thr Ile Pro Ala Gln Glu Leu Cys Gln Lys Gln Ser  
65 70 75 80  
Ile Leu Gly Asp Met Leu Arg Asn Asn Pro Phe Val Met Glu Met Gln

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Trp	Trp	Val	Leu	Val	Ala	Ile	Thr	Ile	val	Glu	Ile	Phe	Arg	Lys	Leu
85								90						95	
		100						105						110	
Tyr	Gly	Ile	Thr	Gly	Tyr	Ser	Ser	Phe	Arg	His	Tyr	Val	Thr	Gln	Val
115						120							125		
Glu	Asn	Ile	Met	Glu	Trp	Phe	Val	Ile	Thr	Ser	Val	Phe	Val	Ile	Ser
130						135							140		
Tyr	Ile	Tyr	Thr	Asn	Lys	Thr	Tyr	Thr	Phe	Gln	Asn	His	Ile	Gly	Ala
145						150							155		160
Phe	Ala	Val	Leu	Leu	Gly	Trp	Thr	Asn	Leu	Met	Leu	Met	Ile	Gly	Gln
165						170							175		
Leu	Pro	Val	Phe	Asp	Val	Tyr	Val	Ala	Met	Tyr	Thr	Arg	Val	Gln	Gly
180						185							190		
Glu	Phe	Ala	Lys	Leu	Phe	Met	Ala	Tyr	Ser	Cys	Met	Leu	Ile	Gly	Phe
195						200							205		
Thr	Ile	Ser	Phe	Cys	Val	Ile	Phe	Pro	Ser	Ser	Ser	Ser	Phe	Ala	Asn
210						215							220		
Pro	Phe	Met	Gly	Phe	Ile	Thr	Val	Leu	Val	Met	Met	Ile	Gly	Gln	
225						230							235		240
Asp	Leu	Ser	Leu	Leu	Ile	Ash	Asp	Pro	Glu	Gly	Lys	Asp	Pro	Pro	Phe
245						250							255		
Leu	Leu	Glu	Val	Ser	Ala	Gln	Ile	Thr	Phe	Val	Leu	Phe	Leu	Leu	Phe
260						265							270		
val	Thr	Ile	Ile	Leu	Met	Asn	Leu	Leu	Val	Gly	Ile	Ala	Val	His	Asp
275						280							285		
Ile	Gln	Gly	Leu	Lys	Lys	Thr	Ala	Gly	Leu	Ser	Lys	Leu	Val	Arg	Gln
290						295							300		
Thr	Lys	Leu	Ile	Ser	Tyr	Ile	Glu	Ser	Ala	Leu	Phe	Asn	Gly	Tyr	Leu
305						310							315		320
Pro	Thr	Trp	Leu	Arg	Asn	Leu	Leu	His	Tyr	Thr	Ala	Leu			
						325							330		

<210> 8  
<211> 314  
<212> PRT  
<213> Drosophila melanogaster

<400> 8

Leu	Leu	Ser	Leu	Ile	Glu	Val	Gly	Gln	Lys	Arg	Ile	Leu	Met	His	Pro
1					5			10		15					
Leu	Cys	Glu	Thr	Phe	Leu	Phe	Leu	Lys	Trp	Arg	Arg	Ile	Arg	Lys	Phe
								20		25				30	
Phe	Leu	Met	Ser	Leu	Ala	Tyr	His	Thr	Leu	Phe	Val	Ile	Leu	Phe	Thr
								35		40				45	
Phe	Tyr	Val	Ile	Trp	Val	Tyr	Val	Arg	Cys	Cys	Lys	Lys	Glu	Glu	Leu
								50		55			60		
Cys	Val	Ala	Pro	Gly	Tyr	Val	Ser	Thr	Ile	Gly	Tyr	Leu	Val	Ile	Ile
								65		70			75		80
Leu	Asn	Leu	Ile	Leu	Gly	Lys	Glu	Val	Phe	Gln	Met	Ala	His	Gly	
								85		90			95		
Leu	Arg	Gly	Tyr	Ala	Lys	Tyr	Trp	Glu	Asn	Trp	Leu	Gln	Trp	Thr	Ile
								100		105			110		
Gly	Thr	Gly	Val	Leu	Leu	Cys	Val	Thr	Pro	Glu	Thr	Val	Arg	Thr	Asp
								115		120			125		
Asp	Leu	Thr	Ala	Val	Pro	Val	Trp	Gln	His	His	Val	Ala	Ala	Ile	Val
								130		135			140		
Ile	Leu	Leu	Val	Trp	Leu	Glu	Leu	Met	Met	Leu	Val	Gly	Arg	Phe	Pro
								145		150			155		160
Ile	Phe	Gly	Val	Tyr	Val	Gln	Met	Phe	Thr	Lys	Val	Ala	Val	Asn	Phe
								165		170			175		
Ala	Lys	Phe	Leu	Leu	Ala	Tyr	Ile	Cys	Leu	Leu	Val	Ala	Phe	Gly	Leu
								180		185			190		
Ser	Phe	Ala	Val	Leu	Phe	Asn	Asp	Tyr	Pro	Ala	Phe	Glu	Asn	Ile	Thr
								195		200			205		
Trp	Ser	Phe	Leu	Lys	Ser	Ile	Thr	Met	Met	Ser	Gly	Glu	Leu	Glu	Phe
								210		215			220		
Glu	Asp	Ile	Phe	Tyr	Gly	Asp	Tyr	Ala	Val	Lys	Phe	Pro	Val	Thr	Ala

## 935.1PC.TXT

225                    230                    235                    240  
 His Ile Ile Phe Leu Ser Phe Val Leu Leu Val Thr Val Ile Leu Thr  
 245                    245                    250                    255  
 Asn Leu Met Val Gly Leu Ala Val Ser Asp Ile Gln Gly Leu Gln Val  
 260                    260                    265                    270  
 Ser Ala Thr Leu Asp Arg Leu Val Arg Gln Ala Glu Leu Val Ser Arg  
 275                    275                    280                    285  
 Leu Glu Ser Leu Phe Phe Ser Arg Leu Leu Arg Ser Ala Pro Thr Asn  
 290                    290                    295                    300  
 Leu Ile Gln Leu Cys Lys Arg Ser Ala Leu  
 305                    305                    310

<210> 9  
<211> 20  
<212> DNA  
<213> Mus Musculus

<400> 9  
agtggggaga ctaccctgtg

20

<210> 10  
<211> 21  
<212> DNA  
<213> Mus Musculus

<400> 10  
tttatcatgc ccatttttg .c

21

<210> 11  
<211> 36  
<212> DNA  
<213> Mus Musculus

<400> 11  
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36

<210> 12  
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<212> DNA  
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37

<210> 13  
<211> 3378  
<212> DNA  
<213> Mus Musculus

<400> 13  
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gtctatcgcg gcgtcgaaaa agacatggac tgctccaagg aatccttaa ggtggacatt 120  
gaaggagata tggtagatt agaagacttc atcaagaacc gaagaaaact aagcaaatat 180  
gaggatgaaa atctctgtcc tctgcacatcac gcagcagcag aaggtcaagt tgaactgtatg 240  
gaactgatca tcaatggttc ttctgtgaa gtgtcaataa taatggatgg ttatggaaat 300  
accccactgc attgtgctgc agaaaaaaat caagttgaaa gtgtaaatgt tcttctcagc 360  
caaggagcaa atccaaaccc cggaaataga aacatgtatgt cacccttca catagctgtg 420  
catggcatgt acaacgaagt gatcaaggtt ttgactgagc acaaggccac taacatcaat 480  
ttagaaggag agaatgggaa cacggctttt atgtccacgt gtgccaaaga caacagtgaa 540  
gctttgcaaa ttttgttaga aaaaggagct aagctgtgt aatcaaataa gtggggagac 600  
taccctgtgc accaggcagc atttgcaggc gccaaaaat gcatggatt aatcttagca 660  
tatggtaaa agaacggcta cagcaggag actcacatta atttgtgaa tcacaagaaa 720  
gccagccctc tccaccttagc agttcaaaagc ggagactgg acatgattaa gatgtgcctg 780  
gacaacggtg cacacatcga catgtggag aatgccaat gcatggccct ccattttgct 840  
gcaaccagg gagccactga catgttaag ctcatgatct catcctatac cgaaagtgt 900  
gatattgtga atgcagttga tggcaatcag gagacccctgc ttcacagagc ctcgttattt 960  
gatcaccatcg acctggcaga atacctaata tcagtggag cagacatcaa cagcactgtat 1020

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cattTgactg	tgacgcagcc	ttatggacta	agaaaattgc	tatgcagatg	1200
caacacatca	aagagctggT	gatggatgaa	gacaatgacg	tctccattat	1260
gcctgttaggc	agggggttcc	tgtctctgt	aataacctcc	tgtgtccatt	1320
catagcaaaa	gtaaagataa	gaagtgcGCC	ctgcattttg	caggcagtt	1380
aatacatgtc	agagacttct	gcaagacata	agtatacg	ggctttgaa	1440
ctccatggga	tgacccctct	ccacCTTgca	gcaaaaaaatg	tgatcgat	1500
ctccttctga	agaaaagggc	cttattttc	atggaccaca	tgctttgcat	1560
cacgcctcca	tgggggggt	cactcagacc	atgaaggtca	ttcttgatac	1620
tgcacagacc	gactagatga	agaagggAAC	acagcactcc	taacttgaaa	1680
catgccaagg	ctgttgcatt	gcttttgagc	tacaatgctg	acatccct	1740
caagcttct	ttctgcata	tgcccTgcac	aataagcgca	aggaaagtgt	1800
atcagaaaata	aaagatggga	tgagtgtct	caagtttca	ctcataatt	1860
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